

BIOGRAPHICAL SKETCH

NAME: Michael Hughes

POSITION TITLE: Toxicologist

EDUCATION/TRAINING

Institution	Degree	Year	Field of Study
University of Michigan	B.S.	1978	Microbiology
University of Kentucky	M.S.	1983	Toxicology
University of Kentucky	Ph.D.	1986	Toxicology

PROFESSIONAL EXPERIENCE:

5/86-10/89	Postdoctoral Fellow, Laboratory of Molecular Biophysics, National Institute of Environmental Health Sciences, Research Triangle Park, NC
11/89-4/90	Staff Fellow, Laboratory of Molecular Biophysics, National Institute of Environmental Health Sciences, Research Triangle Park, NC
5/90-3/91	Project Scientist, ManTech Environmental Technology Inc., Research Triangle Park, NC
4/91-12/91	Project Scientist/ Supervisor, ManTech Environmental Technology Inc., Research Triangle Park, NC
1/92-12/94	Research Scientist/ Supervisor, ManTech Environmental Technology Inc., Research Triangle Park, NC
6/01-9/-1	Acting Supervisory Toxicologist, Pharmacokinetics Branch, Experimental Toxicology Division, National Health and Environmental Research Laboratory, Research Triangle Park, NC
1/95-Present	Toxicologist, Pharmacokinetics Branch, Experimental Toxicology Division, National Health and Environmental Research Laboratory, Research Triangle Park, NC

PROFESSIONAL SOCIETIES:

Society of Toxicology
North Carolina Chapter of the Society of Toxicology
International Society for the Study of Xenobiotics
American Chemical Society

SELECTED AWARDS AND HONORS:

Diplomate, American Board of Toxicology (Second Recertification, 2001)

INVITED LECTURES/SYMPOSIA:

“Mechanisms of Arsenic Toxicity”, International Workshop on Arsenic Toxicity, Brisbane, Australia, Nov 1999

ASSISTANCE/LEADERSHIP PROVIDED TO THE SCIENTIFIC COMMUNITY:

Project Advisory Committee - Arsenic Effect on Gene Expression, American Water Works Association Research Foundation, 1998-present
Temporary Advisor, World Health Organization, Task Group on Arsenic and Arsenic Related Compounds, November, 1999
Advisory Committee - K.L. Rust, Masters of Science in Public Health, Department of Environmental Sciences and Engineering, University of North Carolina-Chapel Hill, 2000
College of Reviewers - Canada Research Chairs Program, 2000

ASSISTANCE/LEADERSHIP PROVIDED TO THE AGENCY:

Radiation Safety Committee, U.S. Environmental Protection Agency, Research Triangle Park Campus;
Member: 1995-2001; Chairman: 2001-present
NHEERL Goal 3 Multi-Year Planning Committee, ETD Representative, 2003
US Environmental Protection Agency, Office of Science Policy, Metals Risk Assessment Framework, Co-author on Issue Paper on Human Health Effects of Metals, 2002

PUBLICATIONS (From January 1, 1998 to present, 12 out of a total of 38 publications):

1. Hughes, M.F. and Kenyon, E.M. (1998) Dose-dependent effects on the disposition of monomethylarsonic acid and dimethylarsinic acid in the mouse after intravenous administration. *Journal of Toxicology and Environmental Health* 53:101-118.
2. Kenyon, E.M., Hughes, M.F., Del Razo, L.M., Edwards, B.C., Mitchell, C.T. and Levander, O.A. (1999) Influence of dietary selenium on the disposition of arsenite and arsenate in the female B6C3F1 mouse. *Environmental and Nutritional Interactions* 3:95-103.
3. Hughes, M.F., Kenyon, E.M., Edwards, B.C., Mitchell, C.T. and Thomas, D.J. (1999) Strain-dependent disposition of inorganic arsenic in the mouse. *Toxicology* 137:95-108.
4. Hughes, M.F., Del Razo, L.M. and Kenyon, E.M. (2000) Dose-dependent effects on tissue distribution and metabolism of dimethylarsinic acid in the mouse after intravenous administration. *Toxicology* 143:155-166.
5. Hughes, M.F. (2000) Final Report for the Interagency Agreement between the U.S. Environmental Protection Agency and the U.S. Consumer Product Safety Commission "In Vitro Dermal Absorption Rate Testing of Flame Retardant Chemicals". CPSC Reference No. CPSC-I-99-1167; EPA Reference No. RW61938773-01-0.
6. Hughes, M.F., Edwards, B.C., Mitchell, C.T. and Bhooshan, B. (2001) In vitro dermal absorption of flame retardant chemicals. *Food and Chemical Toxicology* 39:1263-1270.
7. Kenyon, E.M. and Hughes, M.F. (2001) A concise review of the toxicity and carcinogenicity of dimethylarsinic acid. *Toxicology* 160:227-236.
8. Kenyon, E.M., Hughes, M.F., Del Razo, L.M. and Levander, O.A (2001) The impact of selenium status on the metabolism and disposition of arsenic and its implications for epidemiologic investigations. In: *Arsenic Exposure and Health Effects IV*, W.R. Chappell, C.O. Abernathy, R.L. Calderon, eds., pp. 315-323, Oxford, Elsevier Science Ltd.
9. Hughes, M.F. (2001) Effects on Laboratory Mammals and In Vitro Test Systems (Chapter 7). In: *Arsenic and Arsenic Compounds*, Environmental Health Criteria Monograph 224, International Programme on Chemical Safety, World Health Organization.
10. Hughes, M.F. (2002) Arsenic toxicity and potential mechanisms of action. *Toxicology Letters* 133:1-16.
11. Hughes, M.F., Kenyon, E.M., Edwards, B.C., Mitchell, C.T., Del Razo, L.M., and Thomas, D.J. Accumulation and metabolism of arsenic in mice after repeated administration of arsenate. Submitted to *Toxicology and Applied Pharmacology*.
12. Kenyon, E.M., Hughes, M.F., Evans, M.V., Thomas, D.J., Styblo, M., and Easterling, M. Incorporating mechanistic insights in a PBPK model for arsenic. Submitted to *Arsenic Exposure and Health Effects V*, W.R. Chappell, C.O. Abernathy, R.L. Calderon, eds.